

## ENSAYARA JUMANE, A NEW SPECIES FROM BELIZE, CARIBBEAN SEA (AMPHIPODA, LYSIANASSIDAE)

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*Abstract.* — *Ensayara jumane* is described from Belize. It differs from the west Mexican *Ensayara ramonella* J. L. Barnard (1964) in the excavate posteroventral margins of article 2 on pereopods 5-7, and the sparse (9 versus 25) setae on articles 5-6 of gnathopod 1. A new diagnosis for *Ensayara*, a key to species, list of species, references to original descriptions and geographic codes for each species are provided. This is the first record of the genus from the Caribbean Sea.

We present the genus *Ensayara* in the form to appear in Barnard & Karaman (1990), with a key to species, list of species, references to original descriptions and geographic distribution codes from Barnard & Barnard (1983) for each species.

*Ensayara* J. L. Barnard

*Ensayara* J. L. Barnard, 1964:79 (*Ensayara ramonella* J. L. Barnard, 1964, original designation).

*Diagnosis.* — Flagella of antennae short. Mouthparts forming quadrate bundle. Labrum and epistome each produced separately from the prebuccal complex, epistome blunt and weakly dominant in projection. Incisor weakly toothed at opposite corners; molar simple, large, palp attached opposite molar. Inner plate of maxilla 1 poorly setose (0-1); palp biarticulate, large. Inner and outer plates of maxilliped well-developed, palp strongly exceeding outer plate, dactyl well-developed.

Coxa 1 slightly shortened and partly covered by coxa 2, scarcely tapering.

Gnathopod 1 short, simple, article 6 longer than 5, dactyl small, gnathopod 2 minutely chelate, article 6 slightly shorter than article 5.

Pereopod 3 strongly prehensile, parachelate, hand very broad, palm crenulate or spinose.

Inner ramus of uropod 2 without notch. Uropod 3 short, peduncle elongate, inner ramus slightly shortened, outer ramus 2-articulate. Telson short, entire.

*Variables.* — Peduncle of antenna 1 with three distinct articles (*iara*); coxa 1 large and ordinary (*dentaria*); dactyl of pereopod 7 slender and even (*ramonella*); stunted (*carpinei*).

*Remarks.* — Better microscopy has resolved article 3 of antenna 1 which is small and mostly obsolescent medially, but has 1.5 rows of facial aesthetascs present.

*Relationship.* — Like *Endevoura* in the enlarged prehensile pereopod 3 but dactyl of maxilliped unguiform, not bulbous.

*Species.* — *angustipes* Ledoyer, 1978, 1986 [693]; *carpinei* Bellan-Santini, 1974 [340B]; *dentaria* Hirayama, 1985 [391]; *iara* Lowry & Stoddart, 1983 [776s]; *jumane* Barnard & Thomas, new species, herein [471]; *microphthalmma* Ledoyer, 1986 [698]; *ramonella* J. L. Barnard, 1964 [376].

Marine, cosmopolitan in low latitudes, 1-1900 m, 7 species.

### Key to the Species of *Ensayara*

1. Article 2 of gnathopod 1 toothed, mandibular palp article 3 with 7 D-setae ..... *dentaria*  
- Article 2 of gnathopod 1 smooth,

- mandibular palp article 3 with 1–2 D-setae ..... 2
- 2. Inner rami of uropods 1–2 with 1 spine each ..... 3
- Inner rami of uropods 1–2 without spines ..... 4
- 3. Mandibular palp article 3 with 2 D-setae, inner ramus of uropod 3 reaching apex of article 1 on outer ramus, dactyl of pereopod 7 thick ..... *carpinei*
- Mandibular palp article 3 with 1 D-seta, inner ramus of uropod 3 not reaching apex of article 1 on outer ramus, dactyl of pereopod 7 ordinary ..... *iara*
- 4. Lateral cephalic lobe very sharp, coxae 2–3 with dense, short setae ..... *microphthalmma*
- Lateral cephalic lobe blunt, coxae 2–3 with sparse, tiny setae ..... 5
- 5. Article 2 of pereopod 7 excavate ..... *jumane* n. sp.
- Article 2 of pereopod 7 not excavate ..... 6
- 6. Carpus of pereopod 3 slender (L × W = 18:6), article 3 of antenna 1 free ..... *angustipes*
- Carpus of pereopod 3 stout (L × W = 18:11), article 3 of antenna 1 telescoped into article 2 ..... *ramonella*

*Ensayara jumane*, new species

Figs. 1–3

*Etymology.*—Named for a tribe of Uto-Aztecans Indians from Central America, name a noun in apposition.

*Diagnosis.*—Lateral cephalic lobe stubby, not subacute; eyes large, deeply pigmented; flagellum of antenna 2 not stubby; article 3 of mandibular palp with only 2 inner (C) setae; palp of maxilla 1 uniarticulate; dactyl of maxilliped with strong nail; coxae 1–4 with 0–1 ventral seta or sparse tiny setules, no dense setal clusters; articles 4–5 of pereopod 3 elongate, article 4 expanded (not lin-

ear); article 2 of pereopods 5–7 with posterior setule notches, of pereopods 6–7 posteroventrally excavate; inner ramus of uropods 1–2 naked.

*Description.*—Lateral cephalic lobes lacking cavity below for insertion of antenna 2; eyes black, one row of clear ommatidia exposed peripherally. Antennae 1–2 very short, reaching equally, article 3 of antenna 1 obsolescent medially, armed with 1.5 rows of aesthetascs in callynophore, primary flagellum with 5 articles, accessory flagellum with 3 articles. Gland cone weak, flagellum of antenna 2 with 5 articles.

Prebuccal mass weakly humped anteriorly. Incisors smooth in middle, convex, laciniae mobiles absent, 2 rakers present, molars massive, subconical with weak spinoserrate distomedial margin, otherwise non-tritulative; palp article 1 scarcely elongate, article 2 with 2 apicolateral setae, article 3 with 1–2 inner setae (probably C-type), apex obliquely truncate, with 4 E-setae. Lower lip with fused inner lobes forming broad truncate line, outer plates widely spread, lacking cones, mandibular lobes large. Inner plate of maxilla 1 large, subconical, naked; outer plate with 7 weakly serrate spines, medial margin with thick setules, palp 1-articulate, apex with 3–4 thick and one thin spines. Inner plate of maxilla 2 very short, with 2 apical setae, outer plate more extended but small, with 5 apical setae and 2 basomedial setae on dorsal face. Inner plates of maxillipeds long, slender, with one apicofacial setule and weak, almost fully fused tooth spines on apices, outer plates subfalcate, with several nearly fused tooth-spines on medial margins; palp slender, poorly armed, article 3 with apical comb, dactyl unguiform, with thick apical nail and longitudinal comb.

Coxae 1–4 increasingly elongate, anterior margin of coxa 1 strongly convex, with distal notch and seta, one short midventral but submarginal setule; coxa 2 with 7 tiny and 1 long posteroventral setules; coxa 3 with same; coxa 4 with 15 tiny setules, no corner

seta. Article 3 of gnathopod 1 swollen, article 4 tiny, article 5 scarcely lobate, article 6 strongly tapering, simple, dactyl stubby and setulate. Article 3 of gnathopod 2 elongate, articles 5–6 covered with straw-setules, palm weakly produced. Pereopod 3 grossly subchelate, articles 5–6 attached in eusirid fashion (tenuously), humped base of article 6 flexing into hollow of article 5, palm lined with partially chisel-shaped tooth spines, dactyl fitting palm. Pereopod 4 of normal gammaridean structure, with one unlocking setule. Article 2 of pereopod 5 broadly pyriform, posteriorly lobate, margin weakly crenulose-tulate; pereopods 6–7 slightly longer than 5, article 2 more narrowly pyriform, posteroventral margin weakly concave, weakly lobate.

Posteroventral corner of epimera 2–3 minutely extended as tooth. Uropods 1–2 poorly spinose, one spine each on dorsolateral and dorsomedial apex of peduncles, uropod 1 with basodorsal spine laterally, each outer ramus with one dorsal spine at midlength, apical nails on rami almost fully immersed. Uropod 3 with one apical spine on peduncle, inner ramus not reaching apex of article 1 on outer ramus, latter with apicomedial tooth, rami serrate apicomedia-ly, article 2 of outer ramus prominent. Telson ovate, with 2 pairs of dorsodistal penicillate setules.

*Female* "w."—One large egg (room for 2 more). Oostegites vestigial or absent, coxa 5 with tiny broad flap-lobe tightly appressed to proximal base of coxa, lobe bearing 4

vestigial setules; coxa 4 with similar lobe lacking setules, no oostegites found on coxae 2–3. Coxae 1–4 with ventral submarginal setules much longer than in male, whip-like, formula for coxae 1–4 = 1-6-6-14. Gills sac-like, sharply tapering apically, not plaited, lacking basal lobes.

*Color*.—Ten minutes after preservation, body white, each pereonite with concentrated orange blotch laterally.

*Holotype*.—USNM 242012, male "t" 2.38 mm.

*Type-locality*.—Carrie Bow Cay, Belize, Central America, 18 Jun 1982; south side of channel between Carrie Bow Cay and South Water Cay, formalin wash of coral rubble from overhangs 6 m, J. D. Thomas, collector, station JDT-Bel 75C.

*Paratypes*.—Type locality, male "v" 2.20 mm, female "w" 2.21 mm and 15 other specimens.

*Relationship*.—Differing from the west Mexican *Ensayara ramonella* J. L. Barnard (1964) in the excavate posteroventral margins of article 2 on pereopods 5–7, and the sparse (9 versus 25) setae on articles 5–6 of gnathopod 1.

Closely similar to *E. angustipes* Ledoyer, 1978, from Mauritius, but differing in the excavate article 2 of pereopod 7, the lack of spines on the inner rami of uropods 1–2, the unarticulate palp of maxilla 1, and the presence of a strong nail on the dactyl of the maxilliped.

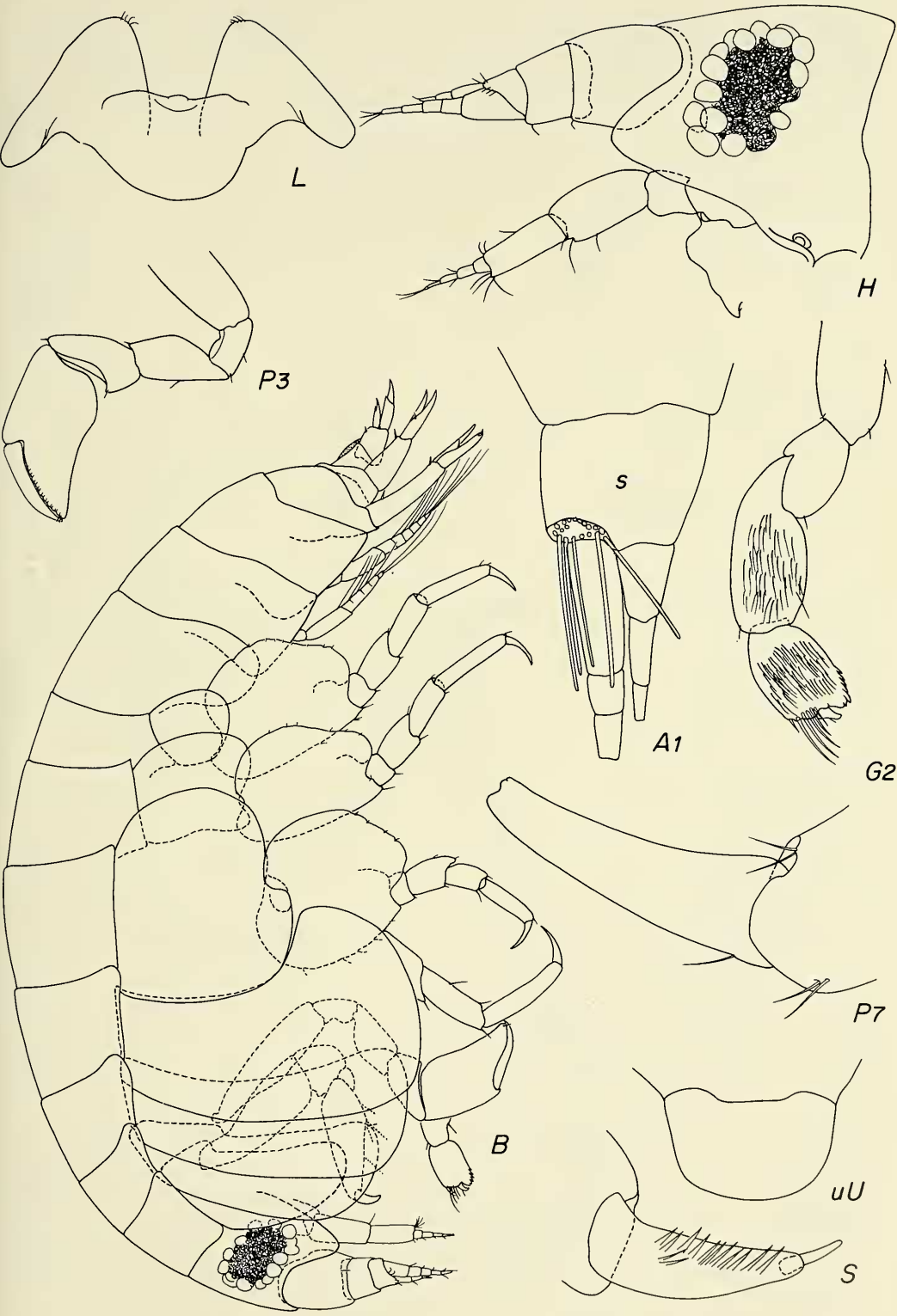
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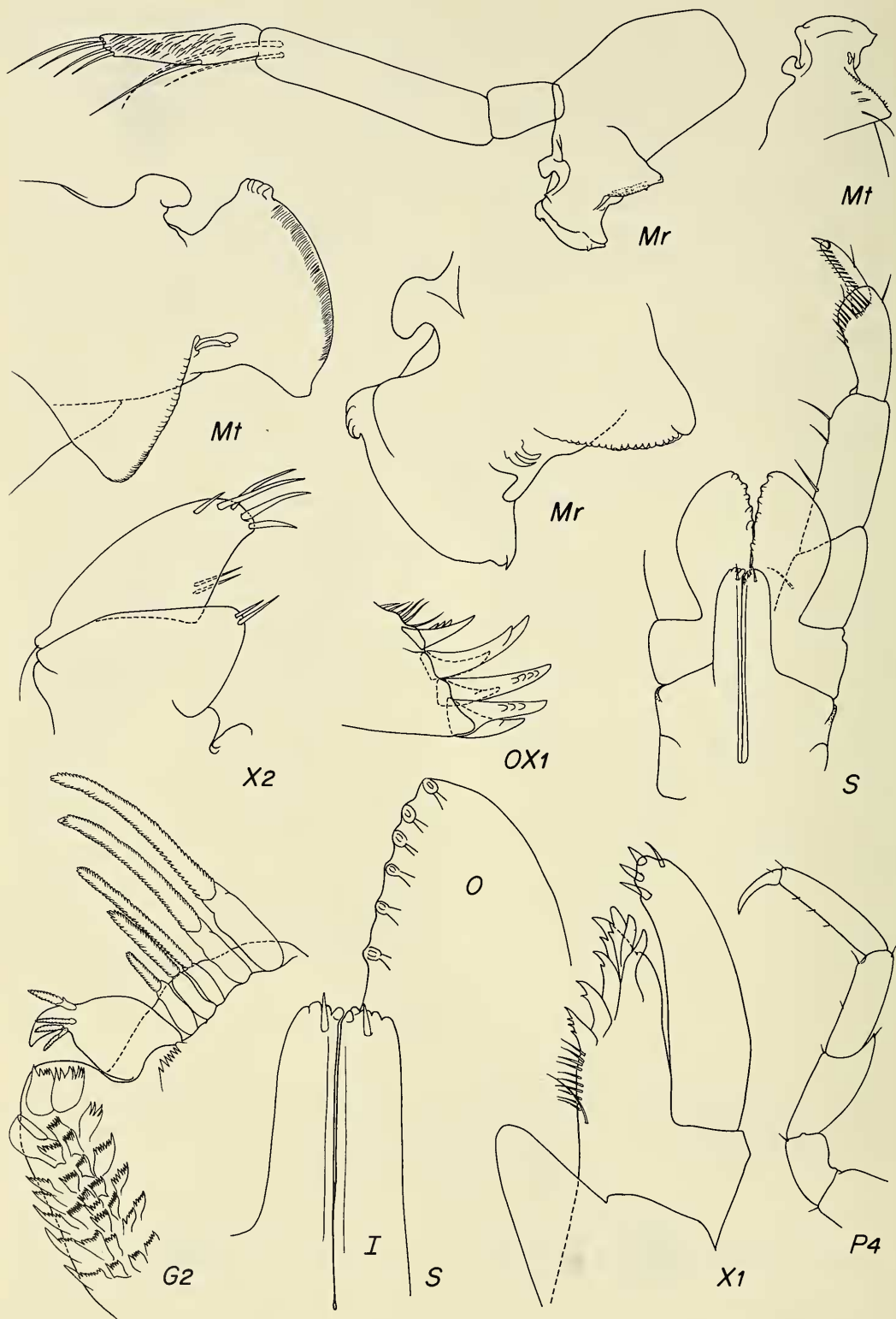
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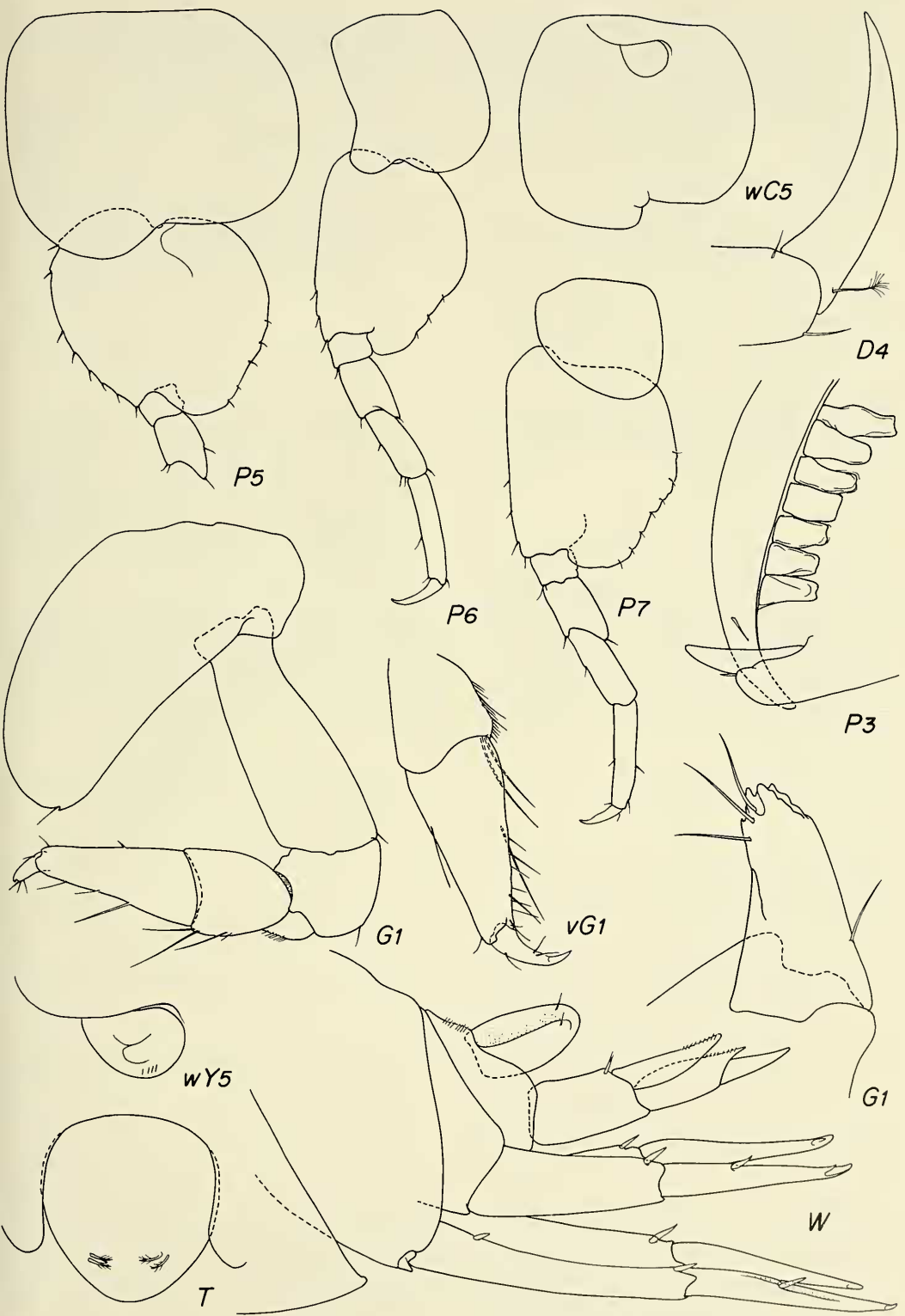
Fig. 1. *Ensayara jumane*, unattributed figures = holotype, male "t" 2.38 mm; u = male "v" 2.20 mm. Legend: Capital letters in figures refer to parts; lower case letters to left of capital letters refer to specimens and to the right refer to adjectives as described below: A, antenna; B, body; C, coxa; D, dactyl; G, gnathopod; H, head; I, inner plate or ramus; L, labium; M, mandible; O, outer plate or ramus; P, pereopod; S, maxilliped; T, telson; U, upper lip; Y, oostegite; r, right; s, setae removed; t, left.

Fig. 2. *Ensayara jumane*, holotype, male "t" 2.38 mm, p. 124.

Fig. 3. *Ensayara jumane*, unattributed figures = holotype, male "t" 2.38 mm; v = male "v" 2.20 mm; w = female "w" 2.21 mm, p. 125.







dition of the nail on the maxillipedal dactyl and the presence or absence of a second (basal) article on the palp of maxilla 1 and these must be confirmed in several of the species by better flattening and higher power microscopy.

*Distribution.*—Belize, 6 m.

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#### Literature Cited

- Barnard, J. L. 1964. Marine Amphipoda of Bahía San Quintin, Baja California.—*Pacific Naturalist* 4:55–139.
- , & C. M. Barnard. 1983. The freshwater Amphipoda of the world. Mt. Vernon, Virginia: Hayfield Associates, 2 volumes, 849 pp.
- , & G. S. Karaman. 1990. The families and genera of marine gammaridean Amphipoda, except Gammaroidea.—Records of the Australian Museum, Supplement (in press).
- Bellan-Santini, D. 1974. Amphipodes bathyaux de Méditerranée.—*Bulletin de l'Institut Océanographique*, Monaco 721(1427):20 pp., 8 figs.
- Hirayama, A. 1985. Taxonomic studies on the shallow water gammaridean Amphipoda of west Kyushu, Japan V. Leucothoidae, Lysianassidae (*Prachynella*, *Aristias*, *Waldeckia*, *Ensayara*, *Lepidepcreum*, *Hippomedon* and *Anonyx*.—Publications of the Seto Marine Biological Laboratory 30:167–212.
- Ledoyer, M. 1978. Amphipodes gammariens (Crustacea) des biotopes cavitaires organogènes récifaux de l'île Maurice (Océan Indien).—*The Mauritius Institute Bulletin* 8:197–332.
- . 1986. Crustacés amphipodes gammariens familles des Haustoriidae à Vitjazianidae.—*Faune de Madagascar* 59:599–1112.
- Lowry, J. K., & H. E. Stoddart. 1983. The shallow-water gammaridean Amphipoda of the subantarctic islands of New Zealand and Australia: Lysianassoidea.—*Journal of the Royal Society of New Zealand* 13:279–294.

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